WHAT IS CLAIMED IS:

1. An air filter having electromagnetic-energy absorptive characteristics, the filter comprising:

a porous substrate; and

an electrically absorptive material applied to the porous substrate, wherein the electrically absorptive material is distributed substantially uniformly through the porous substrate.

2. The air filter of claim 1, wherein the electrically absorptive material comprises an electrical absorber and a binding agent.

3. The air filter of claim 2, wherein the electrical absorber is selected from the group consisting of carbon, carbon particles, carbon fibers, alumina, sapphire, silica, titanium dioxide, ferrite, iron, iron silicide, graphite, and composites of iron, nickel and copper.

4. The air filter of claim 2, wherein the binding agent is selected from the group consisting of an elastomer, a rubber and an epoxy.

5. The air filter of claim 2, wherein the electrically absorptive layer further comprises a highly conductive material.

6. The air filter of claim 5, wherein the highly conductive material is selected from

the group consisting of copper and aluminum.

7. The air filter of claim 1, further comprising a fire-retardant layer.

8. The air filter of claim 7, wherein the fire-retardant layer comprises a fire retardant selected from the group consisting of phosphates and antimony trioxide.

9. The air filter of claim 7, wherein the fire-retardant-treated porous substrate passes a self-extinguishing vertical burn requirement in accordance with Underwriters Laboratories Standard 94.

10. The air filter of claim 1, wherein the porous substrate comprises an open-cell reticulated polyurethane foam.

11. The air filter of claim 10, wherein the foam comprises at least about 10 pores per linear inch.

12. The air filter of claim 1, wherein the porous substrate comprises a fiberglass mat.

13. The air filter of claim 1, wherein the porous substrate comprises a non-woven polyester web.

14. The air filter of claim 1, further comprising an electrically conductive layer.

15. The air filter of claim 14, wherein said electrically conductive layer is an electrical conductor having an array of apertures through which air can flow.

16. The air filter of claim 14, wherein said electrically conductive layer is a conductive coating applied thereto.

17. The air filter of claim 14, wherein the electrically conductive layer comprises a honeycomb.

18. The air filter of claim 1, further comprising a frame fixedly attached to the porous substrate, wherein the frame provides physical support for the porous substrate.

19. The air filter of claim 1, wherein the porous substrate comprises a sheet having a thickness less than about 0.5 inches.

20. The air filter of claim 1, wherein the porous substrate provides at least 20 dB of attenuation to electromagnetic energy substantially occurring at frequencies at least between about 4 GHz and 18 GHz.

21. A method for producing an air filter having electromagnetic-energy-absorptive characteristics comprising the steps of:

providing a porous substrate having a first side and a second side; and

applying an electrically absorptive solution to the porous substrate, wherein the electrically absorptive solution is distributed substantially uniformly through the porous substrate.

22. The method of claim 21, wherein the applying step comprises the sub-steps of:

providing an electrically absorptive solution comprising an electrical absorber and a binding agent;

immersing the porous substrate into the electrically absorptive solution, causing the electrically absorptive solution to penetrate the porous substrate;

extracting the immersed porous substrate from the electrically absorptive solution;

removing excess electrically absorptive solution from the extracted porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate; and

curing the electrically absorptive solution.

23. The method of claim 22, wherein the electrical absorber is selected from the group consisting of carbon, carbon particles, carbon fibers, alumina, sapphire, silica, titanium dioxide, ferrite, iron, iron silicide, graphite, and composites of iron, nickel and copper.

24. The method of claim 22, wherein the binding agent is selected from the group

consisting of an elastomer, a rubber and an epoxy.

25. The method of claim 22, further comprising the step of forcing air through the porous material during at least one of prior to curing and curing, thereby ensuring that pores remain substantially unblocked.

26. The method of claim 25, wherein the step of forcing air through the porous material comprises drawing a vacuum.

27. The method of claim 21, wherein the step of removing excess electrically absorptive solution comprises squeezing the extracted porous substrate.

28. The method of claim 21, wherein the step of applying an electrically absorptive solution is repeated.

29. The method of claim 21, further comprising the step of applying a fire-retardant layer.

30. The method of claim 29, wherein the fire-retardant layer comprises a fire retardant selected from the group consisting of phosphates and antimony trioxide.

31. The method of claim 21, wherein the applying step comprises:

providing an electrically absorptive solution comprising an electrical

absorber and a binding agent;

spraying the electrically absorptive solution onto the first side of the porous substrate;

removing excess electrically absorptive solution from the sprayed, porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate; and

curing the electrically absorptive solution.

32. The method of claim 31, further comprising the step of spraying the electrically absorptive solution onto the second side of the porous substrate.

33. The method of claim 21, wherein the air-flow characteristics of the porous substrate are substantially equivalent before and after the application of the electrically absorptive solution.

34. The method of claim 21, wherein a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 25%.

35. The method of claim 21, wherein a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is more preferably less than 15%.

36. The method of claim 21, wherein a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is even more preferably less than 10%.